Title (en)
    CENTRIFUGAL TURBOMACHINERY

Title (de)
    RADIALE STRÖMUNGSMASCHINE

Title (fr)
    TURBOMACHINES CENTRIFUGES

Publication
    EP 1048850 B1 20060719 (EN)

Application
    EP 99900291 A 19990113

Priority
   • JP 9900077 W 19990113
   • JP 1789898 A 19980114

Abstract (en)
    [origin: EP1048850A1] The present invention provides a centrifugal turbomachinery having a good performance which can effectively reduce the secondary flow in the flow passage of the impeller and minimize the loss caused by the secondary flow without an excessive increase in manufacturing cost. An impeller has a plurality of blades (3) between an inlet (6a) at a central portion and an exit (6b) at a peripheral portion, and a flow passage formed between the blades for delivering fluid from the impeller inlet to the impeller exit by rotation the impeller. The blade (3) is leaned toward a circumferential direction so that the blade at the hub side (2) precedes the blade at the shroud side (4) in a rotational direction of the impeller. A blade lean angle, defined as an angle between the blade and a surface perpendicular to a hub surface as viewed from the direction of the exit, shows a decreasing tendency from the inlet to the exit. A blade centerline at the hub side and a blade centerline at the shroud side as viewed from the front direction at the inlet intersect at a point where non-dimensional radius location, defined as a ratio of the radius of the intersection to the radius of the impeller exit, ranges from 0.8 to 0.95. <IMAGE>

IPC 8 full level
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Cited by
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